

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

REALTIME ADAPTIVE STREAMING  
LLC,

Plaintiff,

v.

SONY ELECTRONICS INC. and  
SONY CORPORATION,

Defendants.

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C.A. No. 17-1693 (JFB) (SRF)

**SONY'S OPENING BRIEF IN SUPPORT OF ITS  
MOTION TO DISMISS FOR PATENT INELIGIBILITY**

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February 22, 2018

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## **I. NATURE AND STAGE OF THE PROCEEDINGS**

On November 21, 2017, Plaintiff Realtime Adaptive Streaming LLC (“Realtime”) filed a complaint against Sony Electronics Inc. and Sony Corporation. (D.I. 1.) On December 26, 2017, the parties filed a Stipulation of Dismissal of Sony Corporation. (D.I. 9.) On February 5, 2018, Sony Electronics Inc. (“Sony”) filed a motion for a definite statement under Fed. R. Civ. P. 12(e) as to all asserted counts (Counts I-VII) on the grounds that Realtime’s allegations were so vague and ambiguous that Sony could not reasonably understand how Realtime was asserting infringement, and of what particular products. (D.I. 13, 14.)

By this motion, Sony challenges the patentability under 35 U.S.C. § 101 of five related Realtime patents asserted in Counts I, III, IV, VI, and VII; namely, U.S. Patent Nos. 7,386,046 (“the ’046 Patent”) (Count I); 8,929,442 (“the ’442 Patent”) (Count III); 8,934,535 (“the ’535 Patent”) (Count IV); 9,762,907 (“the ’907 Patent”) (Count VI); and 9,769,477 (“the ’477 Patent”) (Count VII) (collectively the “Fallon Patents”).

Similar § 101 challenges to these same Fallon Patents are being simultaneously raised by other defendants both in this Court and in three other judicial districts.<sup>1</sup>

## **II. SUMMARY OF THE ARGUMENT**

1. The claims of the Fallon Patents are invalid under 35 U.S.C. § 101 and the two-part test articulated by the Supreme Court in *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2356 (2014). As to *Alice* step one, the claims are all directed to the same abstract

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<sup>1</sup> *Realtime Adaptive Streaming LLC v. Brightcove Inc.*, C.A. No. 17-1519-JFB-SRF (D. Del.) (§ 101 motion filed 1/26/18); *Realtime Adaptive Streaming LLC v. Netflix, Inc.*, C.A. No. 17-1692-JFB-SRF (D. Del.) (§ 101 motion filed 2/5/18); *Realtime Adaptive Streaming LLC v. Sling TV LLC*, No. 1:17-cv-02097 (D. Colo.) (§ 101 motion filed 12/6/17); *Realtime Adaptive Streaming LLC v. Hulu, LLC*, No. 2:17-cv-07611 (C.D. Cal.) (§ 101 motion filed 1/12/18); *Realtime Adaptive Streaming LLC v. Cisco Systems, Inc.*, No. 6:17-cv-00591 (E.D. Tex.) (§ 101 motion filed 1/19/18).

and unpatentable concept of encoding and decoding data – a concept acknowledged by the Federal Circuit as old as communication itself.

2. The additional claims elements in the Fallon Patents do not transform the abstract idea into patent-eligible subject matter under *Alice* step two. The claimed encoding and decoding steps in the Fallon Patents are at best performed by generic computers components, in known technological environments, and thus do not ensure that the patents in practice amount to significantly more than patents on the ineligible concept itself.

### III. STATEMENT OF FACTS

The Fallon Patents describe compression as a technique to encode and decode data. See '535 Patent, 2:47-49 (“data compression techniques . . . may be utilized . . . to encode/decode data”). Encoding is a process of substituting one way of representing data with another. For example, Morse code encodes letters of the alphabet with dots and dashes that could be transmitted on a telegraph or via radio:

1.1.1 Letters			
a	. -	i	..
b	- ...	j	. - - -
c	- . - .	k	- . -
d	- . .	l	. - . .
e	.	m	- -
accented e	. . - . .	n	- .
f	. . - .	o	- - -
g	- - .	p	. - - .
h	. . . .	q	- - . -
		r	. - .
		s	. . .
		t	-
		u	. . -
		v	. . . -
		w	. - -
		x	- . . -
		y	- . - -
		z	- - . .

As explained by the Federal Circuit: “Morse code, ordering food at a fast food restaurant via a numbering system, and Paul Revere’s ‘one if by land, two if by sea’ signaling system all exemplify encoding at one end and decoding at the other end.” *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1326 (Fed. Cir. 2017). Every day, people perform encoding in

their head or via pencil and paper with ease. For example, teenagers use encoding in text messages using a variety of techniques, such as acronyms (LOL, JK, OMG), homonyms (gr8, U), or emojis (*e.g.*, ☺). Attorneys likewise use encoding to represent case citations (*e.g.*, “F.3d,” “U.S.,” “*Id.*”).

Compression is the process of using an encoding system to reduce the size of data. The Fallon Patents acknowledge that compression was well known at the time of the purported inventions: “There are a variety of data compression algorithms that are currently available.” (’535 Patent, 1:31-32.) They also recognize that using compression to process and transmit data was well known: “Data compression is widely used to reduce the amount of data required to process, transmit, or store a given quantity of information.” (*Id.* at 2:44-46.)

The Fallon Patents are all related, have a common specification, and share the same two inventors. The Fallon Patents claim systems and methods for selecting an encoder or compressor (a type of encoder) based on a parameter and encoding and decoding the data.

For each Fallon Patent, Realtime identifies only a single claim in the Complaint as allegedly infringed by Sony. Realtime alleges that Sony infringes other unnamed claims in each Fallon Patent “for similar reasons” with respect to the one asserted claim. (*E.g.*, D.I. 1 ¶ 32.) It is therefore appropriate to use the alleged claims as representative claims for the § 101 analysis.

#### **IV. LEGAL STANDARDS**

Section 101 defines the scope of patent-eligible subject matter as “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.” 35 U.S.C. § 101. Laws of nature, natural phenomena, and abstract ideas are not patentable. *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 70 (2012). Whether a claim recites patent-ineligible subject matter is a question of law. *In re Bilski*, 545 F.3d 943, 951 (Fed. Cir. 2008), *aff’d*, 561 U.S. 593 (2010).

Section 101 patent eligibility may be, and regularly is, decided at the pleadings stage, without claim construction. *See, e.g., Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 717 (Fed. Cir. 2014); *Bancorp Servs., L.L.C. v. Sun Life Assurance Co. Of Canada*, 687 F.3d 1266, 1273-74 (Fed. Cir. 2012); *Jedi Techs., Inc. v. Spark Networks, Inc.*, C.A. No. 16-1055, 2017 U.S. Dist. LEXIS 122313, at \*16-17 (D. Del. Aug. 3, 2017) (explaining “there is no rule requiring that courts wait until a certain stage of litigation before addressing patent-eligible subject matter”). Although the Federal Circuit has recently reversed dismissals on the pleadings for patent ineligibility under § 101 finding facts in dispute as to whether claim elements were well understood, routine, or conventional at the time, *see, e.g., Berkheimer v. HP Inc.*, No. 2017-1437, 2018 U.S. App. LEXIS 3040 (Fed. Cir. Feb. 8, 2018), the court has more recently affirmed that such dismissals on the pleadings are proper where there is no such genuine dispute, such as where the specification makes it clear that the recited claim elements were well understood, routine, or conventional. *Automated Tracking Solutions, LLC v. Coca-Cola Co.*, No. 2017-1494, 2018 U.S. App. LEXIS 3779, at \*13-14 (Fed. Cir. Feb. 16, 2018) (finding no “factual dispute regarding whether the claims recite routine and conventional RFID components” because the specification “more pointedly indicates that the recited components of the claimed RFID system were conventional”).

The Supreme Court has articulated a two-step test for “distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent eligible applications of those concepts.” *Alice*, 134 S. Ct. at 2355 (citing *Mayo*, 566 U.S. at 75-78). The first step of *Alice* requires a court to determine if the claims, “considered in light of the specification . . . [and] as a whole,” are “directed to excluded subject matter.” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1334 (Fed. Cir. 2016). There is no bright line rule that guides



this analysis, and the Federal Circuit and the Supreme Court have “found it sufficient to compare claims at issue to those claims already found to be directed to an abstract idea in previous cases.” *Id.* at 1334-35. For example, where a claim is directed to standard encoding and decoding of image data, it is an abstract idea that fails *Alice* step one. *RecogniCorp*, 855 F.3d at 1326.<sup>2</sup>

If the claims are directed to ineligible subject matter, the court proceeds to the second step of *Alice* and must “search for an ‘inventive concept,’ or some element or combination of elements sufficient to ensure that the claim in practice amounts to ‘significantly more’ than a patent on an ineligible concept.” *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1255 (Fed. Cir. 2014). To save a patent at *Alice* step two, the inventive concept “must be evident in the claims.” *Two-Way Media Ltd. v. Comcast Cable Commc’ns, LLC*, 874 F.3d 1329, 1338-39 (Fed. Cir. 2017). A patentee cannot circumvent the prohibition on patenting abstract ideas by limiting the idea to “a particular technological environment,” or by adding “insignificant post-solution activity,” *Bilski v. Kappos*, 561 U.S. 593, 610-11 (2010) (internal quotation marks omitted), or “well-understood, routine, conventional” features. *Mayo*, 566 U.S. at 79-80. In addition, “the mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention.” *Alice*, 134 S. Ct. at 2358; *Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1341 (Fed. Cir. 2017) (no inventive concept where the claims recited “both a generic computer element – a processor – and a series of generic computer ‘components’ that merely . . . describe the functions of the abstract idea itself, without particularity.”)

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<sup>2</sup> The *RecogniCorp* court explained: “We find that claim 1 is directed to the abstract idea of encoding and decoding image data. It claims a method whereby a user displays images on a first display, assigns image codes to the images through an interface using a mathematical formula, and then reproduces the image based on the codes. . . . This method reflects standard encoding and decoding, an abstract concept long utilized to transmit information.” *Id.* at 1326.

Where claims are “substantially similar and linked to the same abstract idea,” the court may analyze a representative claim. *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat’l Ass’n*, 776 F.3d 1343, 1348 (Fed. Cir. 2014); *Bilski*, 561 U.S. at 612; *BroadSoft, Inc. v. Callwave Commc’ns, LLC*, C.A. No. 13-711-RGA, 2017 U.S. Dist. LEXIS 162931, at \*8 (D. Del. Oct. 1, 2017).

## V. ARGUMENT

### A. The Fallon Patents Claim Abstract Concepts And Fail To Recite Additional Claim Elements That Add Inventive Concept

As explained below for each patent, the claims of the Fallon Patents are all directed to a common abstract idea (*Alice* step one) of selecting a type of data compression based on a *parameter* of the data or of the communications channel (such as “*throughput*” or speed of the channel). Specific language from the asserted claims of each Fallon Patent, each directed to this abstract concept, is shown below:

Fallon Patent	Claim Language
'535 Patent, claim 15	“determining a <i>parameter</i> of . . . a data block” and “selecting one or more asymmetric compressors from among a plurality of compressors based upon the determined parameter”
'477 Patent, claim 1	determine a parameter relating to “ <i>throughput</i> of a communications channel” and, based on that determination, selecting an encoder from a plurality of encoders having different compression rates
'442 Patent, claim 8	“based upon a <i>throughput</i> of a connection channel and a <i>parameter</i> ” of the data, selecting a compression algorithms
'907 Patent, claim 1	analyze a parameter relating to expected “ <i>throughput</i> of a communications channel” to “select two or more different data compression routines”
'046 Patent, claim 40	determine if “ <i>throughput</i> falls below a predetermined threshold” and if so provide “faster rate of compression so as to increase throughput”

The claims also contain no additional elements, or combination of elements, to ensure the patents amount to significantly more than claiming the abstract concept itself, under *Alice* step two. As shown below, the additional elements either relate to a known technological

environment, or recite well-understood, routine, and conventional computer elements such as CPUs and storage mediums, which do not transform the nature of the claims into a patent-eligible applications under § 101.

Claim construction is unnecessary for the Court to decide § 101. In the related case of *Realtime Adaptive Streaming LLC v. Cisco Systems, Inc.*, No. 6:17-cv-0591-JRG (E.D. Tex.), the parties submitted a joint letter on the issue of whether claim construction was needed to inform the Court’s analysis as to patentability. (D.I. 40-1.) Although Cisco’s position was that it was not, Realtime asserted that the claims should be “limited to digital (computer) data.” (*Id.* at 3.) Here, on Sony’s motion, even if the claims were constructed as Realtime argues, *i.e.*, as requiring operations on “digital (computer) data,” as explained below, they would still be invalid under § 101. *See Jedi Techs.*, 2017 U.S. Dist. LEXIS 122313, at \*17 (noting “Jedi failed to identify any specific claims which, if scrutinized during claim construction, could impact the analysis . . .”).

Finally, Realtime may raise, as it did in other cases, that another court (E.D. Tex.) found different “Fallon” patents, asserted by a different entity (Realtime Data LLC), to be patent eligible under § 101. Such findings, however, have no weight here. Those patents were merely “related” to other patents “incorporated-by-reference” in the Fallon Patents, and have different claims. *See Alice*, 134 S. Ct. at 2355 (one must first determine whether “the claims at issue” are directed to a patent-ineligible concept, and then examine “the elements of the claim” to determine if there is an inventive concept to transform the abstract idea).

**B. The ’535 Patent Claims Are Patent Ineligible Under § 101**

**Alice Step One:** The claims of the ’535 Patent are directed to the abstract idea of compressing data based on a parameter of the data. Claim 15, the only specific claim asserted by Realtime, is representative for the § 101 analysis, and recites:

15. A method, comprising:  
determining a *parameter* of at least a portion of a data block;  
selecting one or more asymmetric compressors from among a plurality of compressors based upon the determined *parameter* or attribute;  
compressing the at least the portion of the data block with the selected one or more asymmetric compressors to provide one or more compressed data blocks; and  
storing at least a portion of the one or more compressed data blocks.

All other claims of the '535 Patent provide only slight variations on the idea reflected in claim 15 and fail to disclose anything more than abstract ideas. For example, the other independent claims (claims 1, 27) simply recite using video or audio data. Other claims (*e.g.*, claims 7, 13, 17, 19-21, 23, 29) recite transmitting the data, including “over the Internet.” Other claims (*e.g.*, claims 7, 13-14, 23, 25-26) recite decompressing data, which is simply the reverse of compressing. Still other claims (*e.g.*, claims 3-5, 11) recite the use of computer “files” or retrieving data using well-known processors or CPUs (*e.g.*, claims 18, 30). But specifying the type of data to be encoded, *e.g.*, video or audio, does not elevate the patent to claiming something more than an abstract idea. *See RecogniCorp*, 855 F.3d at 1326 (encoding “image data” was abstract). Transmitting data, including “over the Internet,” also does not add patentable subject matter. *See Ultramercial*, 772 F.3d at 716 (“[T]he use of the Internet is not sufficient to save otherwise abstract claims from ineligibility under § 101.”). Decompressing data is simply the reverse of the compressing process and is likewise abstract under *RecogniCorp*. Finally, the use of data files and CPUs, which are conventional, generic computer elements, does not change the abstract nature of the claims. *Intellectual Ventures*, 850 F.3d at 1341.

The steps of claim 15 of determining a parameter of the data to be compressed, selecting and performing known compression based on the determined parameter, and storing that data are analogous to basic computer functionality that has been found patent ineligible. *See*

*RecogniCorp*, 855 F.3d at 1327; *Context Extraction*, 776 F.3d at 1347 (claims directed to “1) collecting data, 2) recognizing certain data within the collected data set, and 3) storing that recognized data in memory” are patent ineligible); *In re TLI Commc’ns LLC Patent Litig.*, 823 F.3d 607, 611 (Fed. Cir. 2016) (claims directed to “classifying an image and storing the image based on its classification” are patent ineligible); *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016) (“we have treated analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category”).

Although claim 15 does not recite a computer or processor to select the compressor, even if the claims were deemed to require “digital (computer) data,” they do not recite new or unconventional hardware for this step. Indeed, the claims impart no new functions or improvement to a conventional computer, where a user could use a menu on a computer to select a desired compression algorithm, as explained in the Fallon Patents:

In another embodiment, a user . . . can command the system (via a software utility) to utilize a desired compression routine for compressing and storing the compressed program or files to disk. For example, for a power user, a GUI menu can be displayed that allows the user to directly select a given algorithm. (’535 Patent, 14:29-36.)

In *RecogniCorp*, the claims likewise recited steps involving a selection (“selecting a facial feature image”) and performing a step using parameters (performing a multiplication operation on data “using one or more code factors as input parameters”), but were nonetheless held to be directed at an abstract idea. *RecogniCorp*, 855 F.3d at 1324. Such would be the case even of the recited steps were performed using conventional computer elements. *Intellectual Ventures*, 850 F.3d at 1341.

**Alice Step Two:** The additional limitations in the claims do nothing more than implement the abstract idea without any additional inventive concept or adding nonconventional

elements or combinations of elements. The first step of claim 15 of “determining a parameter” does not even specify *how* the parameter is determined or *what* the parameter is. The next step of selecting a compressor “based on the determined parameter” adds nothing more than choosing a known compression algorithm, a known step, somehow “based on” an unspecified parameter. “Based on” also provides no additional patentable elements or steps as to how the selection actually occurs or under what conditions. Rather, the step is merely “selecting *one or more* asymmetric compressors from among a plurality of compressors *based upon* the determined parameter.” The third step of compressing the data, with the selected compressor, is merely the result of the selection step and adds nothing new or inventive since it was known to compress using a selected compressor. The fourth step of “storing” the compressed data is a routine data storage step that was known and likewise adds nothing new or an inventive concept. (’535 Patent, 2:44-46: “Data compression is widely used to reduce the amount of data required to process, transmit, or store a given quantity of information.”)

Lastly, the limitation that one of the selected algorithms is “asymmetric” does not add a new element or render the claims inventive. Asymmetric compression was simply a type of compression, known at the time, which takes a different amount of time to compress than to decompress.<sup>3</sup> The specification of the Fallon Patents in fact discloses “[e]xamples of asymmetric compression algorithms include “dictionary based compression schemes such as Lempel-Ziv.” (’535 Patent, 10:2-4; *see also* 1:35-38.) Thus, limiting a compression algorithm to a known type of “asymmetric” compression is merely a field of use limitation to a particular environment (*i.e.*, environments with both known types of compression – symmetric and asymmetric) that does not

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<sup>3</sup> The Fallon Patents explain an asymmetric data compression algorithm is simply “one in which the execution time for the compression and decompression routines differ significantly.” (’535 Patent, 9:63-65.)

improve on known asymmetric encoding itself and is thus not transformative. *See Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1366 (Fed. Cir. 2015) (“An abstract idea does not become nonabstract by limiting the invention to a particular field of use or technological environment, such as the Internet.”).

**C. The '477 Patent Claims Are Patent Ineligible Under § 101**

**Alice Step One:** The claims of the '477 Patent are also directed to the abstract idea of compressing data based one or more parameters. Claim 1, the only claim asserted by Realtime, is representative for the purposes of the § 101 analysis, and recites:

1. A system, comprising:
  - a plurality of different asymmetric data compression encoders,
  - wherein each asymmetric data compression encoder of the plurality of different asymmetric data compression encoders is configured to utilize one or more data compression algorithms, and
  - wherein a first asymmetric data compression encoder of the plurality of different asymmetric data compression encoders is configured to compress data blocks containing video or image data at a higher data compression rate than a second asymmetric data compression encoder of the plurality of different asymmetric data compression encoders; and
  - one or more processors configured to:
    - determine one or more data parameters, at least one of the determined one or more data parameters relating to a throughput of a communications channel measured in bits per second; and
    - select one or more asymmetric data compression encoders from among the plurality of different asymmetric data compression encoders based upon, at least in part, the determined one or more data parameters.

Despite its wordiness, this claim is similar to '535 Patent claim 15, in that is directed to a system, using “one or more processors,” for implementing the abstract idea of determining a parameter, selecting an encoder, and encoding data. The primary difference is that claim 1 of the '477 Patent recites that at least one of the parameters is a “throughput” (such as “bandwidth” or the rate at which data can be transmitted) of the communications channel. This difference does not save it from patent ineligibility. *Alice*, 134 S. Ct. at 2358 (“the prohibition

against patenting abstract ideas cannot be circumvented by attempting to limit the use of [the idea] to a particular technological environment”); *buySAFE v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2014) (“narrowing to particular types of such relationships, themselves familiar, does not change the analysis”).

Moreover, even though a “processor” is claimed in this claim, putting it in a realm of computer technology, the claim is not any less abstract. Where, as here, the focus of the claims is on abstract ideas that use computers as tools, the claims may fail *Alice* step one. *See, e.g., Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1262 (Fed. Cir. 2016) (claims relating to “deliver[ing] content to a handheld wireless electronic device” were directed to an abstract idea because they claimed “the general concept of out-of-region delivery of broadcast content through the use of conventional devices, without offering any technological means of effecting that concept”).

The other claims contain only minor variations to claim 1 and are likewise abstract. They include claims limiting the encoding algorithm used (*e.g.*, claims 2, 5-6, 10-12, 20, 22, 26) or the parameter (*e.g.*, claims 3-4, 7-9, 17, 20-21, 23-25), yet another instance of trying to limit a claim to a “particular technological environment,” which cannot save a claim. *Alice*, 134 S. Ct. at 2358. Other claims restrict the claims to using a particular type of network, such as the Internet (*e.g.*, claims 13-14, 27), which does not affect the § 101 analysis. *Ultramercial*, 772 F.3d at 716. Other claims include adding a “descriptor” (*e.g.*, claims 15-16, 28), which is the abstract idea of adding a label to the data. Other claims (*e.g.*, claim 19) recite “storing” data, a conventional computer operation that does not change the abstractness analysis as noted above. *See Content Extraction*, 776 F.3d at 1347 (“[t]he concept of data . . . storage is undisputedly well-known”).



**Alice Step Two:** The additional limitations in the claims of the '477 Patent do nothing more than implement the abstract idea without any additional inventive concept, or adding new elements or a new ordered combination of elements, and the '477 Patent fails *Alice* step two for similar reasons as set forth above for the '535 Patent.

The first three claim elements of claim 1 specify a particular known technological environment; such as a “computer” system having multiple asymmetric compression encoders that use compression algorithms (“configured to utilize one or more data compression algorithms”) to compress data (“data blocks containing video or image data”), including encoders that compress at different rates (“a first asymmetric data compression encoder . . . to compress data blocks . . . at a higher data compression rate than a second asymmetric data compression encoder”). This particular environment, of using compression algorithms that compress at different rates, was known and is discussed in the *background* of the Fallon Patents, which noted the “variety of data compression algorithm currently available” with “one or more parameters that can be varied . . . to change the performance characteristics of the compression,” and that compression rates of such compression algorithms can be varied by, for example, the size of the dictionary used. ('535 Patent, 1:30-46; 9:66-10:4: “In particular, with an asymmetrical algorithm, either the compression routine is slow and the decompression routine is fast or the compression routine is fast and the decompression routine is slow. Examples of asymmetrical compression algorithms include dictionary-based compression schemes such as Lempel-Ziv.”)

The last claim element is “one or more processors” configured to “determine one or more parameters” related to “throughput of a communications channel,” and to select one or more encoders “based upon, at least in part, the determined one or more data parameters.” This

claim element adds a well-known element (a processor) and then does not even specify how it determines the data parameters or even which of the compression algorithms is selected based on the parameter based on what conditions. This is akin to the '535 Patent, where the selection is made based on a determined parameter, only here the parameter is “throughput” (bandwidth) of the communications channel ('535 Patent, 1:24), and using one or more generic “processors” to select the encoder does not transform this abstract concept into a patent-eligible application.<sup>4</sup> *Intellectual Ventures*, 850 F.3d at 1341. Indeed, the only computer or physical elements mentioned in any '477 Patent claims are “processors” (claims 1, 20) and “a memory” (claim 19), both well-known conventional computer elements. The recitation of these conventional computer elements fails to provide inventive concept as required by *Alice* step two.

**D. The '442 Patent Claims Are Patent Ineligible Under § 101**

***Alice* Step One:** The claims of the '442 Patent are also directed to the abstract idea of decompressing data that had been encoded based on a parameter and on throughput. Claim 8, the only claim asserted, is representative for the purposes of the § 101 analysis, and recites:

8. An apparatus, comprising:  
a data decompression system configured to decompress a compressed data block; and  
a storage medium configured to store at least a portion of the decompressed data block,  
wherein at least a portion of a data block having video or audio data was compressed  
with one or more compression algorithms selected from among a plurality of  
compression algorithms based upon a throughput of a communication channel and a  
parameter or an attribute of the at least the portion of the data block to create at least the  
compressed data block, and  
wherein at least one of the plurality of compression algorithms is asymmetric.

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<sup>4</sup> The claims also add no elements or combination of elements as to how the processor even determines throughput of the communications channel that would add inventive step.

Claim 8 is substantially similar to the other Fallon Patents' claims directed to the abstract ideas of using a parameter to select an encoder and encoding data. Claim 8 recites decompressing data, but this is simply the reverse of the encoding process and is likewise abstract. *RecogniCorp*, 855 F.3d at 1326 (“claim 1 is directed to the abstract idea of encoding and decoding image data”). Claim 8 attempts to limit the claim to the “particular technological environment” of selecting an encoder based on a throughput, which does not make it any less abstract. *Alice*, 134 S. Ct. at 2358. Claim 8 further recites that data being compressed is “video or audio data,” which also limits the claim to a “particular technological environment” as noted above. *Id.*

The other claims of the '442 Patent add minor variations that do not change the abstract nature of the claims. For example, the other claims recite conventional computer operations like “receiving” data (*e.g.*, claims 3, 9, 17, 24) or attempt to limit the type of compression algorithm used (*e.g.*, claims 2, 15). The dependent claims do not meaningfully change the abstract idea, and trying to limit the claims to “particular technological environments” does not provide a defense under § 101. *Alice*, 134 S. Ct. at 2358; *Ultramercial*, 772 F.3d at 716.

***Alice* Step Two:** The additional limitations do nothing more than implement the abstract idea without any additional inventive concept or additional claim elements, and thus this patent fails *Alice* step two as well. The first two claim elements simply provide the technological environment of any computer system “configured to decompress a compressed block of data” and to store at least a portion of the decompressed data in a “storage medium.” A conventional computer has these well-known components and functions of storing data in a storage medium ('535 Patent, 2:1-14, 2:50-67) and decompressing data compressed by a “variety of data compression algorithms that are currently available” such as a “typical dictionary based

compression algorithm such as Lempel-Ziv” (*id.* at 1:31-32, 1:36-37) or other “rich and highly diverse set of lossless data compression and decompression algorithms [that] exist within the current art” (*id.* at 4:53-43).<sup>5</sup> The remaining “wherein” clauses seemingly relate to how the data “was compressed,” as opposed to reciting elements for *de*compressing the data. Thus, the “wherein” clauses provide no new functionality to a conventional computer. In any event, such wherein clauses specify the same abstract concept of selection of a compression algorithm based upon throughput and a parameter of the data – but this time no physical elements are recited.

The only computer or physical elements mentioned in any of the other claims are generic, conventional hardware such as a “memory device” (claims 6, 12, 20, 28) or “CPUs” (claims 6, 12, 20, 28), which does not impart patentability. *Intellectual Ventures*, 850 F.3d at 1341. As with the other Fallon Patents, the claim language does not restrict the abstract idea to any physical application or implementation or otherwise provide anything that could constitute an inventive step under *Alice* step two.

**E. The '907 Patent Claims Are Patent Ineligible Under § 101**

***Alice* Step One:** The claims of the '907 Patent are also directed to the abstract idea of encoding data using compression based on a parameter or on throughput. Claim 1, the only claim specifically asserted, is representative for the purposes of the § 101 analysis, and recites:

1. A system comprising:

one or more different asymmetric data compression algorithms, wherein each algorithm of the one or more different asymmetric data compression algorithms utilizes one or more asymmetric data compression routines of a plurality of different asymmetric data compression routines, wherein a first asymmetric data compression routine of the

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<sup>5</sup> The Fallon Patents also include a discussion of problems with various prior art compression and decompression techniques by computers existing at the time. ('535 Patent, 6:43-7:23.)

plurality of different asymmetric data compression routines is configured to produce compressed data with a higher data rate for a given data throughput than a second asymmetric data compression routine of the plurality of different asymmetric data compression routines; and

a processor configured:

to analyze one or more data parameters from one or more data blocks containing video data, wherein at least one data parameter relates to an expected or anticipated throughput of a communications channel; and

to select two or more different data compression routines from among a plurality of different data compression routines based upon, at least in part, the one or more data parameters relating to the expected or anticipated throughput of the communications channel.

Claim 1 is substantially similar to the '535 and '477 Patent claims, directed to the abstract ideas of determining a parameter, selecting an encoder, and encoding data. As with the '477 Patent, claim 1 attempts to limit the claim to the particular technological environment of using a parameter relating to a throughput, which does not make it any less abstract. *Alice*, 134 S. Ct. at 2358. Claim 1 further recites that one of the two compression routines compresses to a higher data rate. By limiting the recited compression routines, Realtime again seeks to limit the use of the abstract idea to a particular technological environment, which cannot save the claim. *Id.* Finally, claim 1 recites selecting two different data compression routines. But performing the abstract idea of encoding twice is just as abstract as performing that abstract idea once.

The dependent claims add only minor variations that again do not change the abstract nature of the claims. For example, the claims attempt to limit the type of compression algorithm used (*e.g.*, claims 3-4, 7-9), the parameter (*e.g.*, claims 6, 14), the data itself (*e.g.*, claim 5), or the communications channel (*e.g.*, claims 10-11). Other claims add a “descriptor” (*e.g.*, claims 12-13) as did some claims of the '477 Patent. In total, these dependent claims do not meaningfully change the abstract idea by trying to limit the claims to “particular technological environments,” which does not provide a defense under § 101. *Alice*, 134 S. Ct. at 2358; *Ultramercial*, 772 F.3d at 716.

**Alice Step Two:** The additional limitations do nothing more than implement the abstract idea without any additional inventive concept and thus this patent fails *Alice* step two as well. Again, the first claim element sets forth a known technical environment (like with the '477 Patent) of using different asymmetric compression algorithms, which compress data at different rates (“a first asymmetric data compression routine . . . to produce compressed data with a higher data rate for a given data throughput than a second asymmetric data compression routine”). As noted above, this was a known technical environment. ('535 Patent, 1:30-46.)

The last claim element is merely a “processor” to perform the abstract idea of analyzing “data parameters” that relate to “an expected or anticipated throughput of a communications channel.” The processor then can select compression routines “based upon, at least in part, the one or more data parameters.” However, this element does not specify how it analyzes the data parameters or which compression routines are selected based on what conditions. This is again akin to the '477 and '442 Patents where selection of the compression is made based on a throughput of the communications channel, and using a “processor,” the only mentioned computer or physical element, to make the selection, does not transform this abstract concept into a patent-eligible application. *Intellectual Ventures*, 850 F.3d at 1341.

**F. The '046 Patent Claims Are Patent Ineligible Under § 101**

**Alice Step One:** The claims of the '046 Patent are also directed to the abstract idea of encoding data using compression based on a throughput of a communications channel (here the channel to the storage device). Claim 40, the only claim asserted by Realtime, is representative for the purposes of the § 101 analysis, and recites:

- 40. A system comprising:
  - a data compression system for compressing and decompressing data input;
  - a plurality of compression routines selectively utilized by the data compression system, wherein a first one of the plurality of compression routines includes a first compression

algorithm and a second one of the plurality of compression routines includes a second compression algorithm; and

a controller for tracking throughput and generating a control signal to select a compression routine based on the throughput, wherein said tracking throughput comprises tracking a number of pending access requests to a storage device; and

wherein when the controller determines that the throughput falls below a predetermined throughput threshold, the controller commands the data compression engine to use one of the plurality of compression routines to provide a faster rate of compression so as to increase the throughput.

Claim 40 is substantially similar to the other Fallon Patent claims, also directed to the abstract idea of selecting an encoder based on throughput (or bottlenecking), and encoding data. As with the '477 and '907 Patents, the '046 Patent attempts to limit the claim to the particular technological environment of using a parameter relating to a throughput, but this does not elevate the claim to something more than abstract idea. *Alice*, 134 S. Ct. at 2358. Claim 40 further recites selecting one of the compression routines to compress faster. But by limiting the recited compression routines, Realtime again seeks to limit the use of the abstract idea to a particular technological environment, which cannot save the claim. *Id.*

The other claims merely recite minor variations that do not change the abstract nature of the claims. For example, other claims attempt to limit the type of compression algorithm used (*e.g.*, claims 2, 5, 11, 33-36), the data itself (*e.g.*, claims 3-4, 6-7, 9-10, 12-13, 15-16, 20-21), or communications channel used (*e.g.*, claim 30). Such variations to limit the claims to “particular technological environments” do not meaningfully change the abstract idea under § 101. *Alice*, 134 S. Ct. at 2358; *Ultramercial*, 772 F.3d at 716.

***Alice Step Two:*** The additional limitations do nothing more than implement the abstract idea without any additional inventive concept. The “plurality of compression routines” element merely sets forth a known technical environment where there are a “variety” of “well-defined” compression routines. ('535 Patent, 1:30-46.) Adding a well-known computer element

of a “controller,” *e.g.*, a processor, to track throughput also does not transform this abstract concept into a patent-eligible application. *Intellectual Ventures*, 850 F.3d at 1341. Finally, using a controller to select one of the compression routines to compress faster to increase throughput is again use of a generic computer element that does not transform this abstract concept into a patent-eligible application.

The other claims also fail *Alice* step two for the same reasons as set forth above. The only computer or physical elements mentioned in the claims are generic, functional hardware such as a “storage device” (claims 18, 22, 25, 27-28, 37-41), and a “controller” (claims 23-26, 40). Such claim elements fail to include anything that could constitute inventive steps.

## **VI. CONCLUSION**

All of the Fallon Patent claims are invalid because they claim an abstract idea and because the recited claim elements, alone and as an ordered combination, merely implement this abstract idea using general-purpose computer elements. Accordingly, all claims of the Fallon Patents should be found patent ineligible under 35 U.S.C. § 101, and Counts I, III, IV, VI, and VII of the Complaint should be dismissed.

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February 22, 2018



**CERTIFICATE OF SERVICE**

I hereby certify that on February 22, 2018, I caused the foregoing to be electronically filed with the Clerk of the Court using CM/ECF, which will send notification of such filing to all registered participants.

I further certify that I caused copies of the foregoing document to be served on February 22, 2018, upon the following in the manner indicated:

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